

Oracle® Database

Release Notes

10g Release 1 (10.1.0.2.0) for Solaris Operating System (SPARC)

May 2004

Part No. B13612-05

This document contains important information that was not included in the platform-specific or product-specific documentation for this release.

It contains the following topics:

- [Product Issues](#)
- [Documentation Updates](#)
- [Documentation Accessibility](#)

This document may be updated after release. To check for updates to this document and to view other product-specific release notes, see the Documentation section on the OTN Web site:

<http://otn.oracle.com/documentation>

For additional information about this release, see the readme files located in the `$ORACLE_HOME/relnotes` directory.

Product Issues

The following sections contain information about issues related to Oracle Database 10g and associated products:

- [Silent Installations that Use Automatic Storage Management](#)
- [Oracle CRS Installation on an Oracle9i RAC Cluster](#)
- [Oracle CRS Silent Installation](#)
- [Installing Oracle CRS on Solaris With Sun Cluster](#)
- [Oracle CRS Installation Errors Caused by stty Commands](#)
- [Oracle RAC 10g Private Interconnect Address Specification](#)

ORACLE®

Copyright © 1996, 2004, Oracle.
All rights reserved.

Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

- [ASM Instance Clean Up Procedures for Node Deletion](#)
- [Backing Up the Voting Disk after Installing RAC](#)
- [Remote Undo Tablespaces Do Not Autoextend in RAC Seed Databases](#)
- [Upgrading a Database](#)
- [Upgrading OPS Release 8.1.7 to Oracle RAC 10g](#)
- [SUNWlibC Package for CRS](#)
- [Net Configuration Assistant Help](#)
- [Flashback Table or Flashback Analysis](#)
- [Oracle Workflow](#)
- [Enabling Automated Backups](#)
- [Oracle Internet Directory](#)
- [Error When Viewing Period SQL Execution Plan in Korean](#)
- [Quick Tour Not Available in Oracle Change Management Pack](#)
- [extjob Executable Required Directory Permissions](#)
- [Grid Features](#)
- [NLB Files in Oracle Locale Builder](#)
- [Removing Cloned Oracle Homes](#)
- [Installing Enterprise Security Manager](#)

Silent Installations that Use Automatic Storage Management

You cannot use the silent installation method to install Oracle Database 10g and create a database that uses Automatic Storage Management (ASM) for database storage during the same installation. This is because the `root.sh` script must run before the Database Configuration Assistant (DBCA) can start an ASM instance.

If you want to use the silent installation method to install Oracle Database 10g and create a database that uses ASM, follow these steps:

1. Use the `enterprise.rsp` response file to complete a software-only installation.
2. Run `$ORACLE_HOME/root.sh` after the installation completes.
3. Use the `dbca.rsp` response file to run DBCA in silent mode, using a command similar to the following:

```
$ $ORACLE_HOME/bin/dbca -silent -responseFile /full_path/dbca.rsp
```

Oracle CRS Installation on an Oracle9i RAC Cluster

If you install Oracle CRS on a system that also contains an Oracle9i Real Application Clusters (RAC) cluster, you must reboot all of the Oracle CRS nodes. You can reboot the nodes one at a time to avoid affecting any Oracle9i databases that may be in use.

Oracle assumes that when you install Oracle CRS 10g software, you will also install Oracle Real Application Clusters 10g. If there will be a significant delay before you perform phase two of the RAC installation to install Oracle Real Application Clusters 10g, then run the `/crs_home/bin/gsdctl start` command to start the GSD manually to service the 9.2 SRVCTL tool and assistants. Then before installing Oracle Real Application Clusters 10g, run the `/crs_home/bin/gsdctl stop` command to stop the GSD.

Oracle CRS Silent Installation

If you perform a silent installation of Oracle CRS on multiple nodes, on a system that does not have other Oracle installations, the Installer does not set up the Oracle Inventory correctly.

In this case, after the installation is complete, follow these steps:

1. Run the `oraInstRoot.sh` script on a local node.
2. Copy the `oraInventory` directory from the local node to each of the remote nodes.
3. Log in as the `root` user and run the following script on each remote node:

```
oraInventory/oraInstRoot.sh
```

Installing Oracle CRS on Solaris With Sun Cluster

If you install Oracle CRS on a cluster that users Sun Cluster version 3.1 update 1 or lower, when the Oracle Universal Installer displays the Private Interconnect Enforcement page, do not change any of the default values of Do Not Use. For versions of Sun Cluster higher than 3.1 update 1, specify the special cluster interface as Private on the Private Interconnect Enforcement page.

Oracle CRS Installation Errors Caused by stty Commands

During an Oracle CRS installation, the Installer uses SSH (if available) to run commands and copy files to the other nodes. During the installation, you might see errors similar to the following if a "dot" file on the system (for example, `.bashrc` or `.cshrc`) contains `stty` commands:

```
stty: standard input: Invalid argument
stty: standard input: Invalid argument
```

To avoid this problem, Oracle recommends that you modify these files to suppress all output on `STDERR`, as follows:

- Bourne, Bash, or Korn shell:

```
if [ -t 0 ]; then
    stty intr ^C
fi
```

- C shell:

```
test -t 0
if ($status == 0) then
    stty intr ^C
endif
```

Note: When SSH is not available, the Installer uses the `rsh` and `rcp` commands instead of `ssh` and `scp`. If there are "dot" files that contain `stty` commands that are loaded by the remote shell, this error can also occur.

This issue is tracked through Oracle bug 3414362.

Oracle RAC 10g Private Interconnect Address Specification

During an Oracle RAC 10g installation, the Installer displays two screens on which you specify the IP addresses of the private interconnect. The private interconnect is used for inter-node communication by both Oracle CRS and RAC.

On the Cluster Configuration screen, you must specify a private node name to be associated with each public node name. The public node name is the host name of each node, specified as either an alias or an IP address, and the private node name is the private interconnect address that will be used by Oracle CRS. In the Private Node Name field, enter a private IP address, unique to each node, using dot notation.

The information on the Private Interconnect Enforcement screen is used to determine which private interconnect will be used by RAC database instances. RAC will use all interconnects identified as private in this page. They must all be in an up state, just as if their IP addresses were specified in the initialization parameter, `CLUSTER_INTERCONNECTS`. RAC does not fail over between cluster interconnects; if one is down then the instances using them will not start.

When using Sun Cluster 3, several IP addresses will appear to be likely candidates for the private interconnect addresses. For CRS communication, Oracle recommends that the LOOPBACK IP active on the interface `lo0:1` be used. The LOOPBACK IP is provided by Sun Cluster and is unique for each node. Do not use the node's private hostname, for example `clusternode1-priv`. Fully specify the IP address using dot notation (for example, `172.16.193.1`).

When using Sun Cluster 3, it is not necessary to specify a private interconnect for use by RAC. RAC is able to retrieve the correct IP address from Sun Cluster directly.

When determining the private interconnect addresses, be aware that the private interconnect must be on a different subnet than the public network.

ASM Instance Clean Up Procedures for Node Deletion

To remove the ASM instances, the delete node procedure requires the following additional steps on UNIX-based systems:

1. If this is the Oracle home from which the per-node listener named `LISTENER_nodename` runs, then use NetCA to remove this listener and its CRS resources. If necessary, re-create this listener in another Oracle home.
2. If this is the Oracle home from which the ASM instance runs, then enter the following commands to remove the ASM configuration:

```
$ srvctl stop asm -n node
$ remove asm -n node
```

3. If you are using a cluster file system for your ASM Oracle home, then run the following commands on the local node:

```
$ rm -r $ORACLE_BASE/admin/+ASM
$ rm -f $ORACLE_HOME/dbs/*ASM*
```

4. If you are not using a cluster file system for your ASM Oracle home, then run the `rm` commands listed in the previous step on each node on which the Oracle home exists.
5. Remove `oratab` entries beginning with `+ASM`.

Backing Up the Voting Disk after Installing RAC

After installing Oracle RAC 10g and after ensuring that the system is functioning properly, make a backup of the voting disk. In addition, make a backup of the voting disk contents after you complete any node additions or node deletions and after running any de-installation procedures.

Remote Undo Tablespaces Do Not Autoextend in RAC Seed Databases

If you create a RAC database with two or more instances and you choose to create General Purpose, Transaction Processing, or Data Warehouse databases, and if you use a shared cluster file system or Automatic Storage Management (ASM) for database files, then the Database Configuration Assistant (DBCA) creates undo tablespace datafiles with an initial size of 25 MB and `AUTOEXTEND ON` for the local instance but `AUTOEXTEND OFF` for remote instances.

You can set `AUTOEXTEND ON` for undo tablespace datafiles for remote instances after creating a RAC database using DBCA as follows:

1. Connect to the database instance on the node from which you ran DBCA:

```
$ sqlplus "/ AS SYSDBA"
```

2. Enter the following command to find the datafile names for `UNDOTBS` tablespaces for remote instances:

```
SQL> SELECT file_name FROM SYS.DBA_DATA_FILES  
       WHERE tablespace_name LIKE 'UNDOTBS%' AND AUTOEXTENSIBLE='NO';
```

3. Set `AUTOEXTEND ON` for the datafiles that you found in the previous step:

```
SQL> ALTER DATABASE DATAFILE datafile_name AUTOEXTEND ON;
```

Upgrading a Database

If you choose the Custom installation path and have previous versions of Oracle databases installed, then the Oracle Universal Installer gives you the option of upgrading the existing databases. If you choose to upgrade an existing database, the Oracle Universal Installer displays another screen asking whether you want to create a starter database.

If you choose to create a starter database, the DBCA upgrades the older version of the database to Oracle Database 10g release 1 (10.1), but does not create a starter database.

Upgrading OPS Release 8.1.7 to Oracle RAC 10g

To upgrade Oracle Parallel Server (OPS) release 8.1.7 to Oracle RAC 10g:

1. Upgrade the OPS release 8.1.7 database to Oracle9i RAC release 2 (9.2).
2. Upgrade the Oracle9i RAC database to Oracle RAC 10g.

Note: You cannot use the DBCA to upgrade an OPS release 8.1.7 database to Oracle RAC 10g.

See Also: For information on upgrading an Oracle database, see the *Oracle Database Upgrade Guide*.

SUNWlibC Package for CRS

Before installing CRS, make sure that the SUNWlibC package is installed on the system. This package is required to successfully start CRS.

Net Configuration Assistant Help

In the Net Configuration Assistant (NetCA) help, the link to the Select Oracle Context help topic is broken. The text for this topic is as follows:

Directory Usage Configuration, Select Oracle Context

Oracle administrative content has been found in more than one location in the directory. Oracle administrative content is stored in an Oracle Context, a subtree in the directory that stores Oracle entries.

From the list, select or enter the location you want to use as the default Oracle Context location from which this computer will access Oracle entries, such as connect identifiers.

Flashback Table or Flashback Analysis

If a user invokes the Flashback Table or Flashback Analysis operation, and that user has FLASHBACK ANY TABLE privileges but does not have specific flashback privileges on the objects that flashback is invoked on and does not have DBA privileges, then the following errors may occur:

```
ORA-02002: error while writing to audit trail
ORA-00600: internal error code, arguments: [kzasps1], [4], [47], [],[],
```

To fix this problem, as SYSDBA, grant the user FLASHBACK privilege on the objects that are referred to in the FLASHBACK TABLE statement and then invoke the flashback operation. For example:

```
SQL> GRANT FLASHBACK ON SCOTT.EMP_1 TO user1;
```

This issue is tracked through Oracle bug 3403666.

Oracle Workflow

Although Oracle Workflow is listed on the Companion CD installation screens, it is not included on the Companion CD for this release.

Enabling Automated Backups

While installing Oracle Database, the Specify Backup and Recovery Options screen may appear truncated if your system does not have the required fonts installed. If your system has only fixed-width fonts, you may not be able to fully specify the required information in the Backup Job Credentials area of the screen. To work around this issue, do not select **Enable Automated Backups** on this screen. After the installation is complete, use the Oracle Enterprise Manager 10g Database Control to enable automated backups.

Oracle Internet Directory

This release includes the Oracle Internet Directory (OID) client tools, but it does not include OID server components. OID server components are included with Oracle Application Server 10g. If you require the OID server tools for Oracle Database components, then run them from an Oracle Application Server 10g installation.

The OID client tools include:

- LDAP command-line tools
- Oracle Internet Directory SDK
- Oracle Directory Manager

The OID server components include the following servers and tools for starting and stopping them:

- Directory server
- Directory replication server
- Directory integration server

Error When Viewing Period SQL Execution Plan in Korean

Viewing the execution plan of a Period SQL in Korean causes an internal server error. This problem is unique to Korean; it does not reproduce in Japanese or Chinese. The only workaround currently available is to run the product in a language other than Korean when you need to view this page.

Quick Tour Not Available in Oracle Change Management Pack

Quick Tour is not available in Oracle Change Management Pack. If you try to run it, then an error results.

extjob Executable Required Directory Permissions

To enable the `ext job` executable to locate required libraries, the `/oracle_home/lib` directory and all of its parent directories must have execute permissions for group and other.

Grid Features

Oracle Database New Features for Oracle Database 10g release 1 (10.1) lists two Grid features that are not available in the first release of Oracle Database 10g: Resonance and Transparent Session Migration. These features will be available in a future release.

NLB Files in Oracle Locale Builder

An NLB file is a binary file that contains the settings for a specific language, territory, character set, or linguistic sort. For the initial release, NLB files are not correctly parsed or displayed. When you load an NLB file in Oracle Locale Builder, the NLB information displayed is truncated. This issue is tracked through Oracle bug 3354923.

Removing Cloned Oracle Homes

Note: This issue occurs only if the cloned and source Oracle homes are on the same system.

If you use the Installer to remove a cloned Oracle home, and the cloned Oracle home is on the same system as the source Oracle home, the Installer removes essential files from the source Oracle home. To avoid this issue, remove the cloned Oracle home as follows:

1. Remove the cloned Oracle home manually by deleting the cloned Oracle home directory.
2. Start the Installer from the source Oracle home directory:

```
$ source_oracle_home/oui/bin/runInstaller
```
3. In the Welcome window, click **Deinstall Products**.
The Inventory window appears, listing all of the Oracle homes on the system.
4. In the Inventory window, select the cloned Oracle home, then click **Remove**.

This issue is tracked through Oracle bug 3417663.

Installing Enterprise Security Manager

To install Enterprise Security Manager (ESM), install Oracle Client and choose the Administrator installation type.

Documentation Updates

The following sections contain updates to Oracle documentation:

- [Updates for Real Application Clusters Documentation](#)
- [Updates for Other Documentation](#)

Updates for Real Application Clusters Documentation

The following sections describe corrections and supplemental information for the Oracle Real Application Clusters 10g documentation for UNIX platforms:

- [Sun Cluster Not Required](#)
- [Sun Cluster Private Host Names](#)
- [Installing Oracle CRS](#)
- [De-Installation Procedure Change for UNIX-Based Systems](#)
- [Adding Nodes](#)
- [Deleting Nodes](#)
- [Real Application Clusters Services Deployment Example](#)
- [Running DBCA on RAC](#)

Sun Cluster Not Required

In the *Oracle Real Application Clusters Installation and Configuration Guide*, Chapter 6, "Pre-Installation Tasks for Installing RAC on Solaris Operating System (SPARC 64-Bit)", page 6-6, under the heading "Check for Required Software", note that Sun Cluster is not required. However, if you install it, Sun Cluster will integrate with Oracle CRS.

Sun Cluster Private Host Names

In the *Oracle Real Application Clusters Installation and Configuration Guide*, Chapter 6, "Pre-Installation Tasks for Installing RAC on Solaris Operating System (SPARC 64-Bit)", page 6-22, the information about Sun Cluster private host names applies specifically to Sun Cluster 3.1.

Installing Oracle CRS

The *Oracle Real Application Clusters Installation and Configuration Guide*, Chapter 8, "Installing Cluster Ready Services", under the heading "Installing Cluster Ready Services with the OUI", explains how to run the following script before running Oracle Universal Installer from the Oracle CRS CD-ROM:

```
ORACLE_HOME/bin/localconfig delete
```

Instead, run this script *after* starting the Oracle CRS installation when Oracle displays the warning to stop all Oracle services.

Note: The documentation is correct by instructing you to stop the existing ASM instances before installing Oracle CRS. Only the timing of when to run `localconfig delete` is changed from *before* to *during* the installation.

De-Installation Procedure Change for UNIX-Based Systems

In the *Oracle Real Application Clusters Installation and Configuration Guide*, Chapter 10, "Installing Oracle Database 10g with Real Application Clusters", on page 10-12, do not execute Step 6:

"On UNIX-based systems, remove the OCR by executing the script `CRS_Home/install/rootdeinstall.sh` on a local node".

This step is not required.

Adding Nodes

The following points describe corrections for the node addition procedures in Chapter 5, "Adding and Deleting Nodes and Instances" in the *Oracle Real Application Clusters Administrator's Guide*.

- Under the heading "Step 2 Adding Nodes at the Oracle Clusterware Layer (UNIX and Windows)", point 9 on page 5-6, the format for the `racgns` command should be:

```
racgns add_config new_node_name:4948
```

- Under the heading "Step 4: Adding Nodes at the Oracle RAC Database Layer", point 8 on page 5-9, explains that you must run the Virtual Internet Protocol Assistant (VIPCA). You must run the VIPCA with `root` user privileges.
- Under the heading "Step 4: Adding Nodes at the Oracle RAC Database Layer", point 9 on page 5-10 explains that you must run the `oifcfg` command. The correct syntax for this command requires that you specify either the `-n nodename` option or the `-global` option to complete the command. The correct syntax for the `oifcfg` command is as follows:

```
oifcfg iflist
oifcfg setif {-node nodename | -global} {if_name/subnet:if_type}...
oifcfg getif [-node nodename | -global] [ -if if_name[/subnet]
    [-type if_type] ]
oifcfg delif [-node nodename | -global] [if_name[/subnet]]
oifcfg [-help]
```

A standard Oracle CRS installation issues the `oifcfg` command as in the following example:

```
oifcfg setif -global eth0/146.56.76.0:public \
eth1/192.0.0.0:cluster_interconnect'
```

This sets both networks to `global`. Therefore, you do not need to run the `oifcfg` command manually after you add a node.

- When you add a node to a RAC database, you must also add a listener to the new node by running the Net Configuration Assistant (NetCA).

Deleting Nodes

The following corrections are for the node deletion procedures for UNIX-based systems as described in Chapter 5, "Adding and Deleting Nodes and Instances" in the *Oracle Real Application Clusters Administrator's Guide*. These corrections assume that you have a three-node cluster and that you are deleting the third node.

- Step 2 in the node deletion procedure for UNIX-based systems should read:

After you have deleted the instances from the nodes that you want to delete, delete the node applications for each node by running the following command where `<node1 , node2>` are the nodes that you are removing from your cluster:

```
rootdeletenode.sh <node1>,<node2>
```

- For Step 3 in the node deletion procedure for UNIX-based systems, the `runInstaller` command is located in the `$ORACLE_HOME/oui/bin` directory. In addition, executing this command does not launch the Installer.
- For Step 5 in the node deletion procedure for UNIX-based systems, only run the `<CRS Home>/install/rootdelete.sh` command once for that step. Use the argument `nosharedhome` when using local file systems. The default is `sharedhome` which prevents updating the permissions of local files such that they can be removed by the `oracle` user.
- For Step 7 in the node deletion procedures for UNIX-based systems, the command is located in the Oracle CRS Home directory. In this step, `ORACLE_HOME` should read `CRS_Home` and the text for Step 7 should read:

On the same node and as the `oracle` user, run the command `<CRS home>/oui/bin/runInstaller -updateNodeList ORACLE_HOME=<CRS home> CLUSTER_NODES=node1,node2,... <nodeN>` where `node1` through `<nodeN>` is a comma-separated list of nodes that are remaining in the cluster.

Real Application Clusters Services Deployment Example

The following two sections that describe shadow events and high availability callouts with Oracle Notification Services (ONS) events are supplements for Appendix A, "Services Deployment Example", in the *Oracle Real Application Clusters Deployment and Performance Guide*, part number B10768-01.

Events for Shadow Preconnect Services in Real Application Clusters When using Transparent Application Failover (TAF) PRECONNECT, Real Application Clusters (RAC) high availability maintains a preconnect service to support TAF Preconnect and applications that are configured to manage work on secondary RAC instances. Secondary instances are RAC instances that are not supporting the primary service.

In this type of configuration, Oracle maintains the shadow service on all instances that do not support the primary service. You can use events to stop and start secondary work. The events are posted to callouts and to the Oracle Notification Service (ONS).

To use events, configure the payload with the following format:

Up Event Format:

```
SRV_PRECONNECT VERSION=1.0 service=db_unique_name.db_domain
database=database_name instance=instance_name host=host_name
status=preconn_up reason=timestamp=27-Jan-2004 16:53:58
reported= Tue Jan 27 16:53:59 PST 2004
```

Down Event Format:

```
SRV_PRECONNECT VERSION=1.0 service=db_unique_name.db_domain
database=database_name instance=instance_name host=host_name
status=preconn_down reason=timestamp=27-Jan-2004 16:58:01
reported= Tue Jan 27 16:58:02 PST 2004
```

Up Event Example:

```
@ SRV_PRECONNECT VERSION=1.0 service=MYSERV.us.oracle.com
database=RACEY instance=RACEY1 host=sun880-1
status=preconn_up reason=timestamp=27-Jan-2004 16:53:58
reported= Tue Jan 27 16:53:59 PST 2004
```

Down Event Example:

```
@ SRV_PRECONNECT VERSION=1.0 service=MYSERV.us.oracle.com
database=RACEY instance=RACEY1 host=sun880-1
status=preconn_down reason=timestamp=27-Jan-2004 16:58:01
reported= Tue Jan 27 16:58:02 PST 2004
```

RAC High Availability Callouts and Oracle Notification Event The notification interface is available as a server-side callout and as an Oracle Notification Services (ONS) event. The server-side callout is a script with the same payload as the ONS event that is immediately executed on the server when the condition occurs. Use this method to start and stop server-side applications, to relocate low-priority services when high priority services arrive, and to post tickets for fault tracking. The following table describes the event payload:

Parameter	Description
Event type	The event type for the component such as service, service_member, database, instance, or node
Service name	The service name; matches the configured service in SERVICES\$

Parameter	Description
Database name	The database supporting the service; matches the initialization parameter value for DB_UNIQUE_NAME, which in turn defaults to the value of the initialization parameter DB_NAME
Instance	The name of the instance that supports the service; matches the instance name
Node name	The name of the node that supports the service or the node that has failed; matches the CSS node name
Status	The new status; values are UP, DOWN, and NOT_RESTARTING
Cardinality	Cardinality for the service on UP events
Time stamp	The local time zone to use when ordering notification events
Incarnation	Cluster incarnation for node down

When a session connects, mid-tiers can record the following values that match the HA event payload:

```
sys_context('userenv', 'instance_name');
sys_context('userenv', 'server_host');
sys_context('userenv', 'service_name');
sys_context('userenv', 'db_unique_name');
```

Running DBCA on RAC

The following text appears on page 5-10 of the *Oracle Real Application Clusters Administrator's Guide*:

Execute the following procedures on each new node to add instances:

1. Start the Database Configuration Assistant (DBCA) by entering dbca at the system prompt from the bin directory in the \$ORACLE_HOME on UNIX.

This text should be changed as follows:

Execute the following procedures *for* each new node to add instances:

Updates for Other Documentation

The following sections contain updates to the Oracle Database 10g documentation:

- [Disk Space Requirement for Oracle Database 10g Products](#)
- [Installing Oracle HTML DB](#)
- [Globalization Support](#)
- [Full-Text Searching with Oracle Text](#)
- [View Descriptions](#)
- [Configuring Management Service Processes](#)
- [Monolingual Linguistic Sorting](#)
- [XDK Error Messages](#)
- [Support for Hearing and Speech Impaired Customers](#)

Disk Space Requirement for Oracle Database 10g Products

The disk space requirement listed for Oracle Database 10g products in the *Oracle Database Companion CD Installation Guide for UNIX Systems*, part number B10811-01, is incorrectly shown as 1000 GB. The correct disk space requirement is 1 GB (1000 MB).

Installing Oracle HTML DB

Although the *Oracle Database Companion CD Installation Guide* states that you can install Oracle HTML DB into an existing Oracle home that contains Oracle Application Server 10g or Oracle Enterprise Manager 10g, this type of installation is not supported with this release. You must install Oracle HTML DB with the Apache Standalone component in a separate Oracle home directory.

Globalization Support

The instructions about the `ORA_NLS10` environment variable in the "Using Oracle9i Database Language and Territory Definition Files with Oracle Database 10g" section of the *Oracle Database 10g README* file are incorrect. This is because the `$ORACLE_HOME/nls/data/old` directory contains definitions files which have changed in Oracle Database 10g release 1 only, and not the complete set of the database locale definition files. To include the Oracle9i definitions:

1. Create a new directory:

```
$ mkdir $ORACLE_HOME/nls/data/9i
```


2. Copy the contents of the `$ORACLE_HOME/nls/data` directory to the new directory:

```
$ cp $ORACLE_HOME/nls/data/*.nlb $ORACLE_HOME/nls/data/9i
```

3. Copy the contents of the `$ORACLE_HOME/nls/data/old` directory to the directory that you created in step 1:

```
$ cp $ORACLE_HOME/nls/data/old/*.* $ORACLE_HOME/nls/data/9i
```

4. Set the `ORA_NLS10` environment variable to specify the directory that you created, for example:

- Bourne, Bash, or Korn shell:

```
$ ORA_NLS10=$ORACLE_HOME/nls/data/9i ; export ORA_NLS10
```

- C shell:

```
% setenv ORA_NLS10 $ORACLE_HOME/nls/data/9i
```

See Also: Refer to the *Oracle Database 10g Globalization Support Guide* and the *Oracle Database 10g README* for more information about the changes in the language and territory definition files between Oracle9i and Oracle Database 10g.

Full-Text Searching with Oracle Text

For full-text searching with Oracle Text, you must create XML tables manually.

If you will need to use Oracle Text indexes for text-based `ora:contains` searches over a collection of XML elements, then do not use XML schema annotation `storeVarrayAsTable="true"`. This annotation causes element collections to be persisted as rows in an Index Organized Table (IOT). Oracle Text does not support IOTs.

To be able to use Oracle Text to search the contents of element collections, set parameter `genTables="false"` during schema registration. Then create the necessary tables manually, without using the clause `ORGANIZATION INDEX OVERFLOW`. The tables will then be heap-organized instead of index-organized (IOT), as shown in the following example:

```
CREATE TABLE PurchaseOrder OF XMLTYPE
XMLSCHEMA http://localhost:8080/home/SCOTT/poSource/xsd/purchaseOrder.xsd
ELEMENT "PurchaseOrder"
VARRAY "XMLDATA"."ACTIONS"."ACTION"
STORE AS TABLE ACTION_TABLE ((PRIMARY KEY
(NESTED_TABLE_ID, ARRAY_INDEX)))
VARRAY "XMLDATA"."LINEITEMS"."LINEITEM"
STORE AS TABLE LINEITEM_TABLE ((PRIMARY KEY
(NESTED_TABLE_ID, ARRAY_INDEX)));
```

View Descriptions

Oracle Database Performance Tuning Guide, Chapter 10, "Instance Tuning Using Performance Views", has two incorrect view descriptions. The view names and correct descriptions are as follows:

- **V\$EVENT_HISTOGRAM**
The `V$EVENT_HISTOGRAM` view displays a histogram of the number of waits, the maximum wait, and total wait time on an event basis.
- **V\$SYSTEM_WAIT_CLASS**
The `V$SYSTEM_WAIT_CLASS` view provides the instance-wide time totals for the number of waits and the time spent in each class of wait events. (This description removes the reference to object number.)

Configuring Management Service Processes

In *Oracle High Availability Architecture and Best Practices*, Chapter 8, "Using Enterprise Manager for Monitoring and Detection", the section "Configure At Least Two Service Processes and Load Balance Them" should read as follows:

For the middle tier, the baseline recommendation is to have a minimum of two Management Service processes, using a hardware server load balancer to mask the location of an individual Management Service process and a failure of any individual component. This provides immediate coverage for a single failure in the most critical components in the Enterprise Manager architecture with little interruption of service for all systems monitored using Enterprise Manager. Management Service processes connect to the repository instances using Oracle Net.

Monolingual Linguistic Sorting

In *Oracle Database Globalization Support Guide*, Chapter 5, "Linguistic Sorting and String Searching", the section called "Monolingual Linguistic Sorts" should end with the following note:

Monolingual linguistic sorting is not available for non-Unicode multibyte database character sets. If a monolingual linguistic sort is specified when the database character set is non-Unicode multibyte, then the default sort order is the binary sort order of the database character set. One exception is UNICODE_BINARY. This sort is available for all character sets.

XDK Error Messages

XDK error messages are available at the XML Technology Center on the OTN Web site:

<http://otn.oracle.com/tech/xml/doc/production10g/Javaerrormsgs.html>

Support for Hearing and Speech Impaired Customers

The Text Telephone (TTY) phone number for non-technical support is listed incorrectly in several documents. The correct phone number is 1.800.464.2330.

Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible, with good usability, to the disabled community. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Standards will continue to evolve over time, and Oracle is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For additional information, visit the Oracle Accessibility Program Web site at

<http://www.oracle.com/accessibility/>

Accessibility of Code Examples in Documentation

JAWS, a Windows screen reader, may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, JAWS may not always read a line of text that consists solely of a bracket or brace.

